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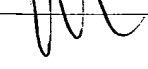
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,789	11/26/2003	Richard O. Glasson	CPI 3 Con	7239
26345	7590	10/18/2004		
GIBBONS, DEL DEO, DOLAN, GRIFFINGER & VECCHIONE 1 RIVERFRONT PLAZA NEWARK, NJ 07102-5497			EXAMINER LOPEZ, FRANK D	
			ART UNIT	PAPER NUMBER

3745

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/722,789	Applicant(s) GLASSON, RICHARD O. 	
	Examiner F. Daniel Lopez	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/26/03</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 49-53 have been renumbered 9-13.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2, 3, 5, 6, 7-8, 9 and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 or 3, 1 or 8, 9, 3, 4, 12, 1 or 7, and 2, respectively, of U.S. Patent No. 6,234,061.

Claims 1; and 5, 7 and 8, are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 8 or 9; and 1, respectively, of U.S. Patent No. 6,694,861.

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Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the limitations of the instant application are found in the above claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made. Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 1-13 are rejected under 35 U.S.C. § 103 as being unpatentable over Novak in view of Pullen. Novak discloses a sensor for a hydraulically actuated cylinder (12) having a piston (14) as a movable element, comprising a flexible connector (34) having first and second ends attached to the movable element and to a converting element, respectively; wherein the converting element converts linear movement of the movable element to a rotating movement of a rotating element (36, 38); and a transducer (112) sensing rotary movement of the rotating element; a recoil mechanism (106) coupled to the rotating element; but does not disclose that the transducer includes a translating member in threaded communication with the rotating element, such that the rotating element converts linear movement of the movable element to a linear movement of the translating member, with the transducer sensing the position of the translating member; with the translating member displaced along an axis of rotation of the rotating member and having an anti-rotational force exerted thereon; that the transducer is one of LVDT, DVRT, potentiometer, inductive transducer, capacitive

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transducer and a Hall-effect transducer; or that there is an anti-backlash force exerted along the longitudinal axis of the translating member.

Pullen teaches, for a transducer sensing rotary movement of a rotating element (24, 26); that the rotating element is in threaded communication with a translating member (40, 60) such that rotary movement of the rotating element is converted to a linear movement of the translating member, with the translating member displaced along an axis of rotation of the rotating member and having an anti-rotational force exerted thereon (by 60); and with an LVDT (62, e.g. column 2 line 46-48), or any convenient kind of linear displacement transducer (e.g. column 3 line 21-26) sensing the position of the translating member, for the purpose of providing a transducer which can be used in environments subject to continuous vibration (e.g. column 1 line 4-17).

Since the actuator of Novak can be used in environments with continuous vibration, and since the teaching of Pullen concerns position sensors used in environments with continuous vibration; the purpose disclosed by Pullen would have been recognized in the pertinent art of Novak. It would have been obvious at the time the invention was made to one having ordinary skill in the art to replace the transducer of Novak with a transducer which includes a translating member in threaded communication with the rotating element, such that rotary movement of the rotating element is converted to a linear movement of the translating member, with the translating member displaced along an axis of rotation of the rotating member; and with an LVDT, or any convenient kind of linear displacement transducer, sensing the position of the translating member, as taught by Pullen, for the purpose of providing a transducer which can be used in environments subject to continuous vibration.

Official notice is taken that a well known linear displacement transducer is a hall-effect transducer. It would have been obvious at the time the invention was made to one having ordinary skill in the art to make the linear displacement transducer of Nowak a Hall effect transducer, as a matter of engineering expediency, and as suggested by Pullen.

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Official notice is taken, for a linear to rotary device including a rotating element having screw threads driving a translating member, that an anti-backlash force is exerted along a longitudinal axis of the translating member, for the purpose of positioning the translating member at a same position, for the same position of the rotating element, no matter which direction the rotating element is rotated. It would have been obvious at the time the invention was made to one having ordinary skill in the art to exert an anti-backlash force along a longitudinal axis of the translating member of Nowak, for the purpose of positioning the translating member at a same position, for the same position of the rotating element, no matter which direction the rotating element is rotated.

Claims 1-13 are rejected under 35 U.S.C. § 103 as being unpatentable over Long in view of Pullen. Long discloses a sensor for a hydraulically actuated cylinder (17, 430') having a piston (19) as a movable element and used in an environment (see fig 1) with continuous vibration, comprising a flexible connector (44, 417) having first and second ends attached to the movable element and to a converting element, respectively; wherein the converting element converts linear movement of the movable element to a rotating movement of a rotating element (e.g. 433); and a potentiometer (434) sensing rotary movement of the rotating element; and a recoil mechanism (433) coupled to the rotating element; but does not disclose that the transducer includes a translating member in threaded communication with the rotating element, such that the rotating element converts linear movement of the movable element to a linear movement of the translating member, with the transducer sensing the position of the translating member; with the translating member displaced along an axis of rotation of the rotating member and having an anti-rotational force exerted thereon; that the transducer is one of LVDT, DVRT, potentiometer, inductive transducer, capacitive transducer and a Hall-effect transducer; or that there is an anti-backlash force exerted along the longitudinal axis of the translating member.

Pullen teaches, for a transducer sensing rotary movement of a rotating element (24, 26); that the rotating element is in threaded communication with a translating member (40, 60) such that rotary movement of the rotating element is converted to a linear movement of the translating member, with the translating member displaced along an axis of rotation of the rotating member and having an anti-rotational force exerted thereon (by 60); and with an LVDT (62, e.g. column 2 line 46-48), or any convenient kind of linear displacement transducer (e.g. column 3 line 21-26) sensing the position of the translating member, for the purpose of providing a replacement transducer, for a potentiometer, which can be used in environments subject to continuous vibration (e.g. column 1 line 4-17).

Since the actuator of Long has a potentiometer used in an environment with continuous vibration, and since the teaching of Pullen concerns potentiometers used in environments with continuous vibration; the purpose disclosed by Pullen would have been recognized in the pertinent art of Long. It would have been obvious at the time the invention was made to one having ordinary skill in the art to replace the transducer of Long with a transducer which includes a translating member in threaded communication with the rotating element, such that rotary movement of the rotating element is converted to a linear movement of the translating member, with the translating member displaced along an axis of rotation of the rotating member; and with an LVDT, or any convenient kind of linear displacement transducer, sensing the position of the translating member, as taught by Pullen, for the purpose of providing a transducer which can be used in environments subject to continuous vibration.

Official notice is taken that a well known linear displacement transducer is a hall-effect transducer. It would have been obvious at the time the invention was made to one having ordinary skill in the art to make the linear displacement transducer of Long a Hall effect transducer, as a matter of engineering expediency, and as suggested by Pullen.

Official notice is taken, for a linear to rotary device including a rotating element having screw threads driving a translating member, that an anti-backlash force is exerted along a longitudinal axis of the translating member, for the purpose of positioning the translating member at a same position, for the same position of the

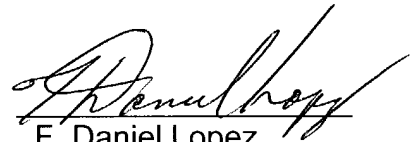
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rotating element, no matter which direction the rotating element is rotated. It would have been obvious at the time the invention was made to one having ordinary skill in the art to exert an anti-backlash force along a longitudinal axis of the translating member of Long, for the purpose of positioning the translating member at a same position, for the same position of the rotating element, no matter which direction the rotating element is rotated.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is (703) 308-0008. The examiner can normally be reached on Monday-Thursday from 6:30 AM -4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on (703) 308-1044. The fax number for this group is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.



F. Daniel Lopez
Primary Examiner
Art Unit 3745
October 12, 2004